



Attorney Docket No.8325-0002.21
USSN 09/942,087
Page 1 of 8

INFORMATION DISCLOSURE CITATION

PTO FORM 1449

Attorney Docket No. S2-US5
(8325-0002.21)
U.S. Serial No.
09/942,087

Applicant: CASE et al.

Filing Date: August 28, 2001

Group Art Unit 1631

Examiner: Unassigned John S. Brusca

U.S. PATENTS

Ex'r Initials	Ref No.	Document No.	Date	Name	Class	Subclass	Filed
✓	A-1	✓ 4,990,607	February 5, 1991	Katagiri et al.			
✓	A-2	✓ 5,096,814	March 17, 1992	Aivasidis et al.			
✓	A-3	✓ 5,096,815	March 17, 1992	Ladner et al.			
✓	A-4	✓ 5,198,346	March 30, 1993	Ladner et al.			
✓	A-5	✓ 5,223,409	June 29, 1993	Ladner et al.			
✓	A-6	✓ 5,243,041	September 7, 1993	Fernandez-Pol			
✓	A-7	✓ 5,302,519	April 12, 1994	Blackwood et al.			
✓	A-8	✓ 5,324,638	June 28, 1994	Tao et al.			
✓	A-9	✓ 5,324,818	June 28, 1994	Nabel et al.			
✓	A-10	✓ 5,324,819	June 28, 1994	Oppermann et al.			
✓	A-11	✓ 5,340,739	August 23, 1994	Stevens et al.			
✓	A-12	✓ 5,348,864	September 20, 1994	Barbacid et al.			
✓	A-13	✓ 5,350,840	September 27, 1994	Call et al.			
✓	A-14	✓ 5,356,802	October 18, 1994	Chandrasegaran			
✓	A-15	✓ 5,376,530	December 27, 1994	De The et al.			
✓	A-16	✓ 5,403,484	April 4, 1995	Ladner et al.			
✓	A-17	✓ 5,436,150	July 25, 1995	Chandrasegaran			
✓	A-18	✓ 5,487,994	January 30, 1996	Chandrasegaran			
✓	A-19	✓ 5,498,530	March 12, 1996	Schatz et al.			
✓	A-20	✓ 5,578,483	November 26, 1996	Evans et al.			
✓	A-21	✓ 5,597,693	January 28, 1997	Evans et al.			
✓	A-22	✓ 5,639,592	June 17, 1997	Abramson et al.			
✓	A-23	✓ 5,674,738	October 7, 1997	Abramson et al.			
✓	A-24	✓ 5,702,914	December 30, 1997	Evans et al.			
✓	A-25	✓ 5,789,538	August 4, 1998	Rebar et al.			
✓	A-26	✓ 5,792,640	August 11, 1998	Chandrasegaran			
✓	A-27	✓ 5,830,721	November 3, 1998	Stemmer et al.			
✓	A-28	✓ 5,869,618	February 9, 1999	Lippman et al.			
✓	A-29	✓ 5,871,902	February 16, 1999	Weininger et al.			
✓	A-30	✓ 5,871,907	February 16, 1999	Winter et al.			
✓	A-31	✓ 5,916,794	June 29, 1999	Chandrasegaran			
✓	A-32	✓ 5,939,538	August 17, 1999	Leavitt et al.			
✓	A-33	✓ 5,972,615	October 26, 1999	An et al.			
✓	A-34	✓ 6,001,885	December 14, 1999	Vega et al.			
✓	A-35	✓ 6,007,988	December 28, 1999	Choo et al.			
✓	A-36	✓ 6,013,453	January 11, 2000	Choo et al.			
✓	A-37	✓ 6,160,091	December 12, 2000	Peukart et al.			

FOREIGN PATENT DOCUMENTS

Ex'r Initials	Ref No.	Document No.	Published	Country	Class	Subclass	Translation
✓	B-1	WO 92/02536	February 20, 1992	PCT			YES NO
✓	B-2	WO 95/11922	May 4, 1995	PCT			
✓	B-3	WO 95/19431	July 20, 1995	PCT			
✓	B-4	WO 96/06110	February 29, 1996	PCT			

Examiner: John S. Brusca

Date: 26 November 2003

Please initial reference if considered, whether or not the citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



Attorney Docket No. 8325-0002.21

USSN: 09/942,087

Page 2 of 8

123	B-5	WO 96/06166	February 29, 1996	PCT				
123	B-6	WO 96/11267	April 18, 1996	PCT				nd
123	B-7	WO 96/20951	July 11, 1996	PCT				
123	B-8	WO 96/32475	October 17, 1996	PCT				
123	B-9	WO 97/27212	July 31, 1997	PCT				
123	B-10	WO 97/27213	July 31, 1997	PCT				
123	B-11	WO 98/53057	November 26, 1998	PCT				
123	B-12	WO 98/53058	November 26, 1998	PCT				
123	B-13	WO 98/53059	November 26, 1998	PCT				
123	B-14	WO 98/53060	November 26, 1998	PCT				
123	B-15	WO 98/54311	December 3, 1998	PCT				
123	B-16	WO 99/36553	July 22, 1999	PCT				
123	B-17	WO 99/41371	August 19, 1999	PCT				
123	B-18	WO 99/42474	August 26, 1999	PCT				
123	B-19	WO 99/45132	September 10, 1999	PCT				
123	B-20	WO 99/47656	September 23, 1999	PCT				
123	B-21	WO 99/48909	September 30, 1999	PCT				
123	B-22	WO 00/23464	April 27, 2000	PCT				
123	B-23	WO 00/27878	May 18, 2000	PCT				
123	B-24	WO 00/41566	July 20, 2000	PCT				
123	B-25	WO 00/42219	July 20, 2000	PCT				
123	B-26	EP 0 875 567	April 8, 1998	EPO				nd

OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)

Ex'r Initial	Ref. No.	Description
123	C-1	Agarwal et al., "Stimulation of Transcript Elongation Requires Both the Zinc Finger and RNA Polymerase II Binding Domains of Human TFIIS," <i>Biochemistry</i> 30(31):7842-7851 (1991)
	C-2	Antao et al., "A Thermodynamic Study of Unusually Stable RNA and DNA Hairpins," <i>Nuc. Acids. Res.</i> 19(21):5901-5905 (1991)
	C-3	Barbas, C. F., "Recent Advances in Phage Display," <i>Curr. Opin. Biotech.</i> 4:526-530 (1993)
	C-4	Barbas et al., "Assembly of Combinatorial Antibody Libraries on Phage Surfaces: The Gene III Site," <i>PNAS</i> 88:7978-7982 (1991)
	C-5	Barbas et al., "Semisynthetic Combinatorial Antibody Libraries: A Chemical Solution to the Diversity Problem," <i>PNAS</i> 89:4457-4461 (1992)
	C-6	Beerli et al., "Toward Controlling Gene Expression at Will: Specific Regulation of the erbB-2/HER-2 Promoter by Using Polydactyl Zinc Finger Proteins Constructed From Modular Building Blocks," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 95:14628-14633 (1998)
	C-7	Beerli et al., "Positive and negative regulation of endogenous genes by designed transcription factors," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 97:1495-1500 (2000)
	C-8	Bellefroid et al., "Clustered Organization of Homologous KRAB Zinc-Finger Genes With Enhanced Expression in Human T Lymphoid Cells," <i>EMBO J.</i> 12(4):1363-1374 (1993)
	C-9	Berg, J.M., "DNA Binding Specificity of Steroid Receptors," <i>Cell</i> 57:1065-1068 (1989)
	C-10	Berg, J.M., "Sp1 and the Subfamily of Zinc-Finger Proteins with Guanine-Rich Binding Sites," <i>PNAS</i> 89:11109-11110 (1992)
	C-11	Berg et al., "The Galvanization of Biology: A Growing Appreciation for the Roles of Zinc," <i>Science</i> 271:1081-1085 (1996)
	C-12	Berg, J.M., "Letting Your Fingers do the Walking," <i>Nature Biotechnology</i> 15:323 (1997)
123	C-13	Bergqvist et al., "Loss of DNA-binding and new Transcriptional Trans-Activation Function in Polyomavirus Large T-Antigen with Mutation of Zinc Finger Motif," <i>Nuc. Acids. Res.</i> 18(9):2715-2720 (1990)

Examiner: Jill. Bruns

Date: 26 November 2003

Please initial reference if considered, whether or not the citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



JB	C-14	Blaese et al., "Vectors in Cancer Therapy: How Will They Deliver?," <i>Cancer Gene Therapy</i> 2(4):291-297 (1995)
	C-15	Bonde et al., "Ontogeny of the v-erbA Oncoprotein from the Thyroid Hormone Receptor: An Alteration in the DNA Binding Domain Plays a Role Crucial for verbA Function," <i>J. Virology</i> 65(4):2037-2046 (1991)
	C-16	Caponigro et al., "Transdominant Genetic Analysis of a Growth Control Pathway," <i>PNAS</i> 95:7508-7513 (1998)
	C-17	Celenza et al., "A Yeast Gene That Is Essential for Release from Glucose Repression Encodes a Protein Kinase," <i>Science</i> 233:1175-1180 (1986)
	C-18	Cheng et al., "Identification of Potential Target Genes for Adrlp through Characterization of Essential Nucleotides in UAS1," <i>Mol. Cellular Biol.</i> 14(6):3842-3852 (1994)
	C-19	Cheng et al., "A Single Amino Acid Substitution in Zinc Finger 2 of Adrlp Changes Its Binding Specificity at two Positions in UAS1," <i>J. Mol. Biol.</i> 251:1-8 (1995)
	C-20	Choo et al., "A Role in DNA-Binding for the Linker Sequences of the First Three Zinc Fingers of TFIIIA Nuc. Acids Res. 21(15):3341-3346 (1993)
	C-21	Choo et al., "Promoter-Specific Activation of Gene Expression Directed By Bacteriophage-Selected Zinc Fingers," <i>J. Mol. Biol.</i> 273:525-532 (1997)
	C-22	Choo et al., "Designing DNA-Binding Proteins on the Surface of Filamentous Phage," <i>Curr. Opin. Biotechnology</i> 6:431-436 (1995);
	C-23	Choo, Y., "Recognition of DNA Methylation by Zinc Fingers," <i>Nature Struct Biol.</i> 5(4):264-265 (1998)
	C-24	Choo et al., "All Wrapped Up," <i>Nature Struct Biol</i> 5(4):253-255 (1998)
	C-25	Choo, Y., "End Effects in DNA Recognition Code," <i>Nuc. Acids. Res.</i> 26(2):554-557 (1998)
JB	C-26	Choo et al., Physical Basis of Protein-DNA Recognition Code," <i>Curr. Opin. Struct. Biol.</i> 7(1):117-125 (1997)
	C-27	Choo et al., "Toward a Code for the Interactions of Zinc Fingers With DNA: Selection of Randomized Fingers Displayed on Phage," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 91:11163-11167 (1994)
JB	C-28	Choo et al., "Selection of DNA Binding Sites for Zinc Fingers using Randomized DNAs reveals Coded Interactions," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 91:11168-11172 (1994)
JB	C-29	Choo et al., "In vivo Repression by a Site-Specific DNA-Binding Protein Designed against an Onogenic Sequence," <i>Nature</i> 372:642-645 (1994)
	C-30	Clarke et al., "Zinc Fingers in <i>Caenorhabditis elegans</i> : Finding Families and Probing Pathways," <i>Science</i> 282:2018-2022 (1998)
	C-31	Corbi et al., "Synthesis of a New Zinc Finger Peptide: Comparison of Its "Code" Deduced and "CASTing" Derived Binding Sites," <i>FEBS Letters</i> 417:71-74 (1997)
	C-32	Crozatier et al., "Single Amino Acid Exchanges in Separate Domains of the Drosophila Serendipity Zinc Finger Protein Cause Embryonic and Sex Biased Lethality," <i>Genetics</i> 131:905-916 (1992)
	C-33	Debs et al., "Regulation of Gene Expression in Vivo by Liposome-Mediated Delivery of a Purified Transcription Factor," <i>J. Biological Chemistry</i> 265(18):10189-10192 (1990)
	C-34	DesJardins et al., "Repeated CT Elements Bound by Zinc Finger Proteins Control the Absolute and Relative Activities of the Two Principal Human C-myc Promoters," <i>Mol. Cell. Biol.</i> 13(9):5710-5724 (1993)
	C-35	Desjarlais et al., "Redesigning the DNA-Binding Specificity of a Zinc Finger Protein: A Data Base-Guided Approach," <i>Proteins: Structure, Function, and Genetics</i> 12(2):101-104 (1992)
	C-36	Desjarlais et al., "Redesigning the DNA-Binding Specificity of a Zinc Finger Protein: A Data Base-Guided Approach," <i>Proteins: Structure, Function, and Genetics</i> 13(3):272 (1992) <i>no copy provided</i>
JB	C-37	Desjarlais et al., "Toward Rules Relating Zinc Finger Protein Sequences and DNA Binding Site Preferences," <i>PNAS</i> 89:7345-7349 (1992)
	C-38	Desjarlais et al., "Use of a Zinc-Finger Consensus Sequence Framework and Specificity Rules to Design Specific DNA Binding, Proteins," <i>PNAS</i> 90:2256-2260 (1993)
	C-39	Desjarlais et al., "Length-Encoded Multiplex binding Site Determination: Application to Zinc Finger Proteins," <i>PNAS</i> 91:11099-11103 (1994)

Examiner: John B. Bruner

Date: 26 November 2003

Please initial reference if considered, whether or not the citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



23	C-40	Dibello et al., "The Drosophila Broad-Complex Encodes a Family of Related Proteins Containing Zinc Fingers," <i>Genetics</i> 129:385-397 (1991)
	C-41	Donze et al., "Activation of delta-globin gene expression by erythroid Kruppel-like factor: a potential approach for gene therapy of sickle cell disease," <i>Blood</i> 88:4051-4057 (1996)
	C-42	Elrod-Erickson et al., "High-Resolution Structures of Variant Zif268-DNA Complexes: Implications for Understanding Zinc Finger-DNA Recognition," <i>Structure</i> 6(4):451-464 (1998)
	C-43	Elrod-Erickson et al., "Zif268 Protein-DNA Complex Refined at 1.6: a Model System for Understanding Zinc Finger-DNA Interactions," <i>Structure</i> 4(10):1171-1180 (1996)
	C-44	Fairall et al., "The Crystal Structure of a Two Zinc-Finger Peptide Reveals an Extension to the Rules for Zinc-Finger /DNA Recognition," <i>Nature</i> 366:483-487 (1993)
	C-45	Frankel et al., "Fingering Too Many Proteins," <i>Cell</i> 53:675 (1988)
	C-46	Friesen et al., "Phage Display of RNA Binding Zinc Fingers from Transcription Factor IIA," <i>J. Biological Chem.</i> 272(17):10994-10997 (1997)
	C-47	Friesen et al., "Specific RNA Binding Proteins Constructed from Zinc Fingers," <i>Nature Structural Biology</i> 5(7):543-546 (1998)
	C-48	Ghosh "A relational database of transcription factors," <i>Nucleic Acids Res</i> 18:1749-1756 (1990)
	C-49	Gillemans et al., "Altered DNA Binding Specificity Mutants of EKLF and Spi Show that EKLF is an Activator of the b-Globin Locus Control Region <i>in vivo</i> ," <i>Genes and Development</i> 12:2863-2873 (1998)
	C-50	Gogos et al., "Recognition of Diverse Sequences by Class I Zinc Fingers: Asymmetries and Indirect Effects on Specificity in the Interaction Between CF2II and A+T-Rich Sequences Elements," <i>PNAS</i> 93(5):2159-2164 (1996)
	C-51	Gossen et al., "Tight Control of Gene Expression in Mammalian Cells by Tetracycline-Responsive Promoter," <i>PNAS</i> 89:5547-5551 (1992)
	C-52	Greisman & Pabo, "A General Strategy for Selecting High-Affinity Zinc Finger Proteins for Diverse DNA Target Sites," <i>Science</i> 275:657-661 (1997)
	C-53	Hall et al., "Functional Interaction Between the Two Zinc Finger Domains of the V-erbA Oncoprotein," <i>Cell Growth & Differentiation</i> 3:207-216 (1992)
	C-54	Hamilton et al., "High Affinity Binding Sites for the Wilms' Tumor Suppressor Protein WT1," <i>Nuc. Acids. Res.</i> 23(2):277-284 (1995)
	C-55	Hamilton et al., "Comparison of the DNA Binding Characteristics of the Related Zinc Finger Proteins WT1 and EGR1," <i>Biochemistry</i> 37:2051-2058 (1998)
	C-56	Hanas et al., "Internal Deletion Mutants of <i>Xenopus</i> Transcription Factor IIIA," <i>Nuc. Acids. Res.</i> 17(23):9861-9870 (1989)
	C-57	Hayes et al., "Locations of Contacts Between Individual Zinc Fingers <i>Xenopus laevis</i> Transcription Factor IIIA and the Internal Control Region of a 5S RNA Gene," <i>Biochemistry</i> 31:11600-11605 (1992)
	C-58	Heinzel et al., "A Complex containing N-CoR, MSin3 and Histone Deacetylase Mediates Transcriptional Repression," <i>Nature</i> 387:43-48 (1997)
	C-59	Hirst et al., "Discrimination of DNA Response Elements for Thyroid Hormone and Estrogen is Dependent on Dimerization of Receptor DNA Binding Domains," <i>PNAS</i> 89:5527-5531 (1992)
	C-60	Hoffman et al., "Structures of DNA-Binding Mutant Zinc Finger Domains: Implications for DNA Binding," <i>Protein Science</i> 2:951-965 (1993)
	C-61	Imhof et al., "Transcriptional Regulation of the AP-2alpha Promoter by BTEB-1 and AP-2REP, a Novel WT-1/EGR-Related Zinc Finger Repressor," <i>Molecular and Cellular Biology</i> 19(1):194-204 (1999)
	C-62	Isalan et al., "Synergy Between Adjacent Zinc Fingers in Sequence-Specific DNA Recognition," <i>PNAS</i> 94(11):5617-5621 (1997)
	C-63	Isalan et al., "Comprehensive DNA Recognition Through Concerted Interactions from Adjacent Zinc Fingers," <i>Biochemistry</i> 37:12026-12033 (1998)
	C-64	Jacobs, G.H., "Determination of the Base Recognition Positions of Zinc Fingers From Sequence Analysis," <i>EMBO J.</i> 11(12):4507-4517 (1992)

Examiner: J.S. Brunn Date: 2/11 November 2003

Please initial reference if considered, whether or not the citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



Attorney Docket No. 8325-0002.21
 USSN: 09/942,087
 Page 5 of 8

	C-65	Jamieson et al. "A Zinc Finger Directory for High-Affinity DNA Recognition," <i>PNAS</i> <u>93</u> :12834-12839 (1996)
	C-66	Jamieson et al., "In Vitro Selection of Zinc Fingers with Altered DNA-Binding Specificity" <i>Biochemistry</i> <u>33</u> :5689-5695 (1994)
	C-67	Jones et al., "Replacing the complementarity-determining regions in a human antibody with those from a mouse" <i>Nature</i> <u>321</u> :522-525 (1986)
	C-68	Julian et al., "Replacement of His23 by Cys in a Zinc Finger of HIV-1NCp7 Led to a Change in 1H NMR-Derived 3D Structure and to a Loss of Biological Activity," <i>FEBS Letters</i> <u>331</u> (1,2):43-48 (1993)
JB	C-69	Kamiuchi et al., "New Multi Zinc Finger Protein: Biosynthetic Design and Characteristics of DNA Recognition," <i>Nucleic Acids Symposium Series</i> <u>37</u> :153-154 (1997)
JB	C-70	Kang et al., "Zinc Finger Proteins as Designer Transcription Factors," <i>J. Biol. Chem.</i> <u>275</u> (12):8742-8748 (2000)
	C-71	Kim et al., "Serine at Position 2 in the DNA Recognition Helix of a Cys2-His2 Zinc Finger Peptide is Not, in General, Responsible for Base Recognition," <i>J. Mol. Biol.</i> <u>252</u> :1-5 (1995)
	C-72	Kim et al., "Site-Specific Cleavage of DNA-RNA Hybrids by Zinc Finger/FokI Cleavage Domain Fusions," <i>Gene</i> <u>203</u> :43-49 (1997)
	C-73	Kim et al., "A 2.2 Å Resolution Crystal Structure of a Designed Zinc Finger Protein Bound to DNA," <i>Nat. Struct. Biol.</i> <u>3</u> (11):940-945 (1996)
	C-74	Kim et al., "Design of TATA Box-Binding Protein/Zinc Finger Fusions for Targeted Regulation of Gene Expression," <i>PNAS</i> <u>94</u> :3616-3620 (1997)
	C-75	Kim et al., "Hybrid Restriction Enzymes: Zinc Finger Fusions Fok I Cleavage Domain," <i>PNAS</i> <u>93</u> :1156-1160 (1996)
	C-76	Kim et al. "Transcriptional repression by zinc finger peptides. Exploring the potential for applications in gene therapy" <i>J. Biol. Chem.</i> <u>272</u> :29795-29800 (1997)
	C-77	Kim et al. "Getting a handhold on DNA: design of poly-zinc finger proteins with femtomolar dissociation constants" <i>Proc. Natl. Acad. Sci. USA</i> <u>95</u> :2812-2817 (1998)
	C-78	Kinzler et al., "The GLI Gene is Member of the Kruppel Family of Zinc Finger Proteins," <i>Nature</i> <u>332</u> :371-374 (1988)
	C-79	Klug, A., "Gene Regulatory Proteins and Their Interaction with DNA," <i>Ann. NY Acad. Sci.</i> <u>758</u> :143-160 (1995)
	C-80	Klug et al., "Protein Motifs 5: Zinc Fingers," <i>FASEB J.</i> <u>9</u> :597-604 (1995)
	C-81	Klug, "Zinc Finger Peptides for the Regulation of Gene Expression," <i>J. Mol. Biol.</i> <u>293</u> :215-218 (1999)
	C-82	Kothekar, "Computer Simulation of Zinc Finger Motif from Cellular Nucleic Acid Binding Proteins and Their Interaction with Consensus DNA Sequences," <i>FEBS Letters</i> <u>274</u> (1,2):217-222 (1990)
	C-83	Kriwacki et al. "Sequence-specific recognition of DNA by zinc finger peptides derived from the transcription factor Sp-1," <i>Proc. Natl. Acad. Sci. USA</i> <u>89</u> :9759-9763 (1992)
	C-84	Kudla et al., "The Regulatory Gene <i>areA</i> Mediating Nitrogen Metabolite R in <i>Aspergillus nidulans</i> Mutations Affecting Specificity of Gene Activation Alter a Loop Residue of Putative Zinc Finger," <i>EMBO J.</i> <u>9</u> (5):1355-1364 (1990)
	C-85	Laird-Offringa et al., "RNA-Binding Proteins Tamed," <i>Nat. Structural Biol.</i> <u>5</u> (8):665-668 (1998)
	C-86	Liu et al., "Design of Polydactyl Zinc-Finger Proteins for Unique Addressing Within Complex Genomes," <i>Proc. Natl. Acad. Sci. U.S.A.</i> <u>94</u> :5525-5530 (1997)
JB	C-87	Liu et al., "Transcription Factor EGR-1 Suppresses the Growth and Transformation of Human HT-1080 Fibrosarcoma Cells by Induction of Transforming Growth Factor Beta 1," <i>Proc. Natl. Acad. Sci. U.S.A.</i> <u>93</u> (21):11831-11836 (1996)
JB	C-88	Liu et al., "Regulation of an Endogenous Locus Using a Panel of Designed Zinc Finger Proteins Targeted to Accessible Chromatin Regions: Activation of Vascular Endothelial Growth Factor A," <i>Journal of Biological Chemistry</i> <u>276</u> (14):11323-11334 (2001)

Examiner: J.B. Brusca

Date: 26 November 2003

Please initial reference if considered, whether or not the citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



✓	C-89	Mandel-Gutfreund et al., "Quantitative Parameters for Amino Acid-Base Interaction: Implication for Prediction of Protein-DNA Binding Sites," <i>Nuc. Acids Res.</i> <u>26</u> (10):2306-2312 (1998)
✓	C-90	Margolin et al., "Kruppel-Associated Boxes are Potent Transcriptional Repression Domains," <i>PNAS</i> <u>91</u> :4509-4513 (1994)
✓	C-91	Mizushima et al., "pEF-BOS, a Powerful Mammalian Expression Vector," <i>Nuc. Acids. Res.</i> <u>18</u> (17):5322 (1990)
✓	C-92	Mukhopadhyay et al. "The von Hippel-lindau Tumor Suppressor Gene Product Interacts with Sp1 to Repress Vascular Endothelial Growth Factor Promoter Activity" <i>Mol. Cell. Biol.</i> <u>17</u> (9):5629-5639 (1997)
✓	C-93	Nakagama et al., "Sequence and Structural Requirements for High-Affinity DNA Binding by the WT1 Gene Product," <i>Molecular and Cellular Biology</i> <u>15</u> (3):1489-1498 (1995)
✓	C-94	Nardelli et al., "Zinc Finger-DNA Recognition: Analysis of Base Specificity by Site-Directed Mutagenesis," <i>Nucleic Acids Research</i> <u>20</u> (16):4137-4144 (1992)
✓	C-95	Nardelli et al., "Base Sequence Discrimination by Zinc-Finger DNA-Binding Domains," <i>Nature</i> <u>349</u> :175-178 (1991)
✓	C-96	Nekludova et al., "Distinctive DNA Conformation With Enlarged Major Groove is Found in Zn-Finger-DNA and Other Protein-DNA Complexes," <i>PNAS</i> <u>91</u> :6948-6952 (1994)
✓	C-97	Orkin et al., "Report and Recommendations of the Panel to Assess the NIH Investment in Research on Gene Therapy," (December 7, 1995)
✓	C-98	Pabo et al., "Systematic Analysis of Possible Hydrogen Bonds between Amino Acid Side Chains and B-form DNA," <i>J. Biomolecular Struct. Dynamic</i> <u>1</u> :1039-1049 (1983)
✓	C-99	Pabo et al., "Protein-DNA Recognition," <i>Ann. Rev. Biochem.</i> <u>53</u> :293-321 (1984)
✓	C-100	Pabo, C. O., "Transcription Factors: Structural Families and Principles of DNA Recognition," <i>Ann. Rev. Biochem.</i> <u>61</u> :1053-1095 (1992)
✓	C-101	Pavletich et al., "Crystal Structure of a Five-Finger GLI-DNA Complex: New Perspectives on Zinc Fingers," <i>Science</i> , <u>261</u> :1701-1707 (1993)
✓	C-102	Pavletich et al., "Zinc Finger-DNA Recognition: Crystal Structure of a Zif268-DNA Complex at 2.1 Å," <i>Science</i> <u>252</u> :809-817 (1991)
✓	C-103	Pengue et al., "Repression of Transcriptional Activity at a Distance by the Evolutionarily Conserved KRAB Domain Present in a Subfamily of Zinc Finger Proteins," <i>Nuc. Acids Res.</i> <u>22</u> (15):2908-2914 (1994)
✓	C-104	Pengue et al., "Transcriptional Silencing of Human Immunodeficiency Virus Type I Long Terminal Repeat-Driven Gene Expression by the Kruppel-Associated Box Repressor Domain Targeted to the Transactivating Response Element," <i>J. Virology</i> <u>69</u> (10):6577-6580 (1995)
✓	C-105	Pengue et al., "Kruppel-Associated Box-Mediated Repression of RNA Polymerase II Promoters is Influenced by the Arrangement of Basal Promoter Elements," <i>PNAS</i> <u>93</u> :1015-1020 (1996)
✓	C-106	Pomerantz et al., "Analysis of Homeodomain Function by Structure-Based Design of a Transcription Factor," <i>PNAS</i> <u>92</u> :9752-9756 (1995)
✓	C-107	Pomerantz et al., "Structure-Based Design of a Dimeric Zinc Finger Protein," <i>Biochemistry</i> <u>37</u> (4):965-970 (1998)
✓	C-108	Pomerantz et al., "Structure-Based Design of Transcription Factors," <i>Science</i> <u>267</u> :93-96 (1995)
✓	C-109	Qian et al., "Two-Dimensional NMR Studies of the Zinc Finger Motif: Solution Structures and Dynamics of Mutant ZFY Domains Containing Aromatic Substitutions in the Hydrophobic Core," <i>Biochemistry</i> <u>31</u> :7463-7476 (1992)
✓	C-110	Quigley et al., "Complete Androgen Insensitivity Due to Deletion of Exon C of the Androgen Receptor Gene Highlights the Functional Importance of the Second Zinc Finger of the Androgen Receptor <i>in Vivo</i> ," <i>Molecular Endocrinology</i> <u>6</u> (7):1103-1112 (1992)
✓	C-111	Rauscher et al., "Binding of the Wilms' Tumor Locus Zinc Finger Protein to the EGR- I Consensus Sequence," <i>Science</i> <u>250</u> :1259-1262 (1990)
✓	C-112	Ray et al., "Repressor to Activator Switch by Mutations in the First Zn Finger of the Glucocorticoid Receptor: Is Direct DNA Binding Necessary?," <i>PNAS</i> <u>88</u> :7086-7090 (1991)

Examiner: JK. Brumro Date: 26 January 2003

Please initial reference if considered, whether or not the citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



✓	C-113	Rebar et al., "Phage Display Methods for Selecting Zinc Finger Proteins with Novel DNA-Binding Specificities," <i>Methods in Enzymology</i> 267:129-149 (1996)
✓	C-114	Rebar et al., "Zinc Finger Phage: Affinity Selection of Fingers With New DNA-Binding Specificities," <i>Science</i> 263:671-673 (1994)
✓	C-115	Reith et al., "Cloning of the Major Histocompatibility Complex Class II Promoter Binding Protein Affected in a Hereditary Defect in Class II Gene Regulation," <i>PNAS</i> 86:4200-4204 (1989)
✓	C-116	Rhodes et al., "Zinc Fingers: They Play a Key Part in Regulating the Activity of Genes in Many Species, From Yeast to Humans. Fewer Than 10 Years Ago No One Knew They Existed." <i>Scientific American</i> 268:56-65 (1993)
✓	C-117	Rice et al., "Inhibitors of HIV Nucleocapsid Protein Zinc Fingers as Candidates for the Treatment of AIDS," <i>Science</i> 270:1194-1197 (1995)
✓	C-118	Rivera et al., "A Humanized System for Pharmacologic Control of Gene Expression," <i>Nature Medicine</i> 2(9):1028-1032 (1996)
✓	C-119	Rollins et al., "Role of TFIIB Zinc Fingers <i>In vivo</i> : Analysis of Single-Finger Function in Developing <i>Xenopus</i> Embryos," <i>Molecular Cellular Biology</i> 13(8):4776-4783 (1993)
✓	C-120	Sadowski et al., "GAL4-VP16 is an unusually potent transcriptional activator," <i>Nature</i> 335:563-568 (1988)
✓	C-121	Saleh et al., "A Novel Zinc Finger Gene on Human Chromosome 1 qter That is Alternatively Spliced in Human Tissues and Cell Lines," <i>American Journal of Human Genetics</i> 52:192-203 (1993)
✓	C-122	Shi et al., "Specific DNA-RNA Hybrid Binding by Zinc Finger Proteins," <i>Science</i> 268:282-284 (1995)
✓	C-123	Shi et al., "DNA Unwinding Induced by Zinc Finger Protein Binding," <i>Biochemistry</i> 35:3845-3848 (1996)
✓	C-124	Shi et al., "A Direct Comparison of the Properties of Natural and Designed Finger Proteins," <i>Chem. & Biol.</i> 2(2):83-89 (1995)
✓	C-125	Singh et al., "Molecular Cloning of an Enhancer Binding Protein: Isolation by Screening of an Expression Library with a Recognition Site DNA," <i>Cell</i> 52:415-423 (1988)
✓	C-126	Skerka et al., "Coordinate Expression and Distinct DNA-Binding Characteristics of the Four EGR-Zinc Finger Proteins in Jurkat T Lymphocytes," <i>Immunobiology</i> 198:179-191 (1997)
✓	C-127	South et al., "The Nucleocapsid Protein Isolated from HIV-1 Particles Binds Zinc and Forms Retroviral-Type Zinc Fingers," <i>Biochemistry</i> 29:7786-7789 (1990)
✓	C-128	Spengler et al., "Regulation of Apoptosis and Cell Cycle Arrest by ZZC1, A Novel Zinc finger Protein Expressed in the Pituitary Gland and the Brain," <i>EMBO J.</i> 16(10):2814-2825 (1997)
✓	C-129	Suzuki et al., "Stereocchemical Basis of DNA Recognition by Zn Fingers," <i>Nuc. Acids Res.</i> 22(16):3397-3405 (1994)
✓	C-130	Suzuki et al., "DNA Recognition Code of Transcription Factors in the Helix-turn-Helix, Probe Helix, Hormone Receptor, and Zinc Finger Families," <i>PNAS</i> 91:12357-12361 (1994)
✓	C-131	Swirnoff et al., "DNA-Binding Specificity of NGFI-A and Related Zinc Finger Transcription Factors," <i>Mol. Cell. Biol.</i> 15 (4):2275-2287 (1995)
✓	C-132	Taylor et al., "Designing Zinc-Finger ADRI Mutants with Altered Specificity of DNA Binding to T in UAS1 Sequences," <i>Biochemistry</i> 34:3222-3230 (1995)
✓	C-133	Thiesen et al., "Determination of DNA Binding Specificities of Mutated Zinc Finger Domains," <i>FEBS Letters</i> 283(I):23-26 (1991)
✓	C-134	Thiesen et al., "Amino Acid Substitutions in the SP1 Zinc Finger Domain Alter the DNA Binding Affinity to Cognate SP1 Target Site," <i>Biochem. Biophys. Res. Communications</i> 175(I):333-338 (1991)
✓	C-135	Thiesen, H. J., "From Repression Domains to Designer Zinc Finger Proteins: A Novel Strategy for Intracellular Immunization Against HIV," <i>Gene Expression</i> 5:229-243 (1996)
✓	C-136	Thukral et al., "Localization of a Minimal Binding Domain and Activation Regions in Yeast Regulatory Protein ADR1," <i>Molecular Cellular Biology</i> 9(6):2360-2369 (1989)
✓	C-137	Thukral et al., "Two Monomers of Yeast Transcription Factor ADR1 Bind a Palindromic Sequence Symmetrically to Activate ADH2 Expression," <i>Molecular Cellular Biol.</i> 11(3):1566-1577 (1991)

Examiner:

J.B. Brusca

Date: *26 November 2003*

Please initial reference if considered, whether or not the citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



RB	C-138	Thurkral et al., "Alanine Scanning Site-Directed Mutagenesis of the Zinc Fingers of Transcription Factor ADR1: Residues that Contact DNA and that Transactivate," <i>PNAS</i> 88:9188-9192 (1991), + correction page
	C-139	Thukral et al., "Mutations in the Zinc Fingers of ADR1 That Change the Specificity of DNA Binding and Transactivation," <i>Mol. Cell Biol.</i> 12(6):2784-2792 (1992)
	C-140	Vortkamp et al., "Identification of Optimized Target Sequences for the GL13 Zinc Finger Protein," <i>DNA Cell Biol.</i> 14(7):629-634 (1995)
	C-141	Wang et al., "Dimerization of Zinc Fingers Mediated by Peptides Evolved <i>In Vitro</i> From Random Sequences," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 96:9568-9573 (1999)
	C-142	Webster et al., "Conversion of the E1A Cys4 Zinc Finger to a Nonfunctional His2, Cys2 Zinc Finger by a Single Point Mutation," <i>PNAS</i> 88:9989-9993 (1991)
	C-143	Whyatt et al., "The Two Zinc Finger-Like Domains of GATA-1 Have Different DNA Binding Specificities," <i>EMBO J.</i> 12(13):4993-5005 (1993)
	C-144	Wilson et al., "In Vivo Mutational Analysis of the NGFI-A Zinc Fingers," <i>J. Biol. Chem.</i> 267(6):3718-3724 (1992)
	C-145	Witzgall et al., "The Kruppel-Associated Box-A (KRAB-A) Domain of Zinc Finger Proteins Mediates Transcriptional Repression" <i>PNAS</i> 91:4514-4518 (1994)
	C-146	Wolfe et al., Analysis of Zinc Fingers Optimized Via Phage Display: Evaluating the Utility of a Recognition Code," <i>J. Mol. Biol.</i> 285:1917-1934 (1999)
	C-147	Wright et al., "Expression of a Zinc Finger Gene in HTLV-1 and HTLV-II Transformed Cells," <i>Science</i> 248:588-591 (1990)
	C-148	Wu et al., "Building Zinc Fingers by Selection: Toward a Therapeutic Application," <i>PNAS</i> 92:344-348 (1995)
	C-149	Wu et al., "Human Immunodeficiency Virus Type 1 Nucleocapsid Protein Reduces Reverse Transcriptase Pausing at a Secondary Structure near the Murine Leukemia Virus Polypurine Tract" <i>J. Virol.</i> 70(10):7132-7142 (1996)
	C-150	Yang et al., "Surface Plasmon Resonance Based Kinetic Studies of Zinc Finger-DNA Interaction," <i>J. Immunol. Methods</i> 183:175-182 (1995)
	C-151	Yu et al., "A Hairpin Ribozyme Inhibits Expression of Diverse Strains of Human Immunodeficiency Virus Type 1," <i>PNAS</i> 90:6340-6344 (1993)
↓	C-152	Zhang et al., "Synthetic Zinc Finger Transcription Factor Action at an Endogenous Chromosomal Site. Activation of the Human Erythropoietin Gene," <i>Journal of Biological Chemistry</i> 275(43):33850-33860 (2000)
	C-153	Search of Swissprot Data Base Performed CA August 2000

nd date of publication

Examiner: J. L. Brusca Date: 26 November 2003
 Please initial reference if considered, whether or not the citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.